Claimset

What is claimed is:

1   1.   A method of viewing information, the method comprising,

2   employing one or more data objects contained within a data source,

3   employing a spatial paradigm for defining hierarchical relationships between said

4 data objects,

5   defining one or more hierarchical plates,

6   defining an appearance for each of said hierarchical plates, said appearance

7 containing a graphical representation of one or more of said data objects, and

8   locating in a virtual space each of said one or more hierarchical plates, based at

9 least in part on said spatial paradigm.

1   2.   The method of claim 1, wherein the step of defining an appearance further

2 comprises, defining in a portion of said appearance of a first of said one or more

3 hierarchical plates an appearance of data objects associated with a second hierarchical

4 plate at a size relatively smaller than data objects contained in said first hierarchical plate.

1   3.   The method of claim 1 further comprising employing raster graphics in defining

2 said graphical representation.

1   4.   The method of claim 1 further comprising employing vector graphics in defining

2 said graphical representation.

1   5.   A method of viewing information, the method comprising,

2   employing one or more hierarchical plates, each one of said hierarchical plates

3 having an appearance, said appearance containing a graphical representation of one or

4 more data objects associated with said one of said hierarchical plates,

5   employing a hierarchical relationship in a virtual display space between said one

6 or more hierarchical plates,

7   displaying on a client, from an adjustable viewing perspective of a user, said

8 appearance of a first of one or more hierarchical plates, said appearance corresponding to

9 a current virtual location of said user, and

10   enabling said user to navigate said one or more hierarchical plates in a

11 substantially unrestricted fashion.

1   6.   The method of claim 5, wherein said step of displaying on a client further

2 comprises displaying in a portion of said appearance of said first hierarchical plate an

3 appearance of data objects associated with a second hierarchical plate, located virtually

4 behind said first hierarchical plate in said virtual display space.

1   7.   The method of claim 5 wherein said step of displaying in a portion of said

2 appearance of said first hierarchical plate further comprises displaying said appearance of

3 data objects associated with a second hierarchical plate at a size relatively smaller than

4 said data objects associated with said first hierarchical plate.

1   8.   A method according to claim 5 further comprising,

2   defining virtual distances from each of said hierarchical plates to said user,

3   as said virtual distance from said first one of said hierarchical plates to said user

4 decreases, displaying a reduced number of said one or more of said data objects

5 associated with said first one of said hierarchical plates, and displaying more detail with

6 respect to said reduced number, and

7   as said virtual distance from said first one of said hierarchical plates to said user

8 increases, displaying an increased number of said one or more of said data objects

9 associated with said first one of said plates, and displaying less detail with respect to said

10 increased number.

1 9. A method according to claim 5 further comprising, defining said first hierarchical

2 plate to be translucent, and enabling said user to view through said first hierarchical plate

3 one or more data objects on a second one of said hierarchical plates located at a greater

4 virtual distance from said user than said first hierarchical plate.

1 10. A method according to claim 5 further comprising, defining said first hierarchical

2 plate to be opaque, and inhibiting said user from viewing through said first hierarchical

3 plate said one or more data objects associated with a second one of said hierarchical

4 plates located at a greater virtual distance from said user than said first hierarchical plate.

1 11. A method according to claim 5 further comprising,

2   defining a closest one of said one or more hierarchical plates as having a smallest

3 one of said virtual distances, and

4   employing said closest one of said hierarchical plates as said first one of said

5   hierarchical plates.

1   12.   A method according to claim 5 further comprising,

2   organizing said one or more data objects on one of said one or more hierarchical

3   plates to be hierarchically equivalent.

1   13.   A method according to claim 5 further comprising,

2   defining a virtual translational position of said user with respect to said one or

3   more of said data objects.

1   14.   Enabling said user to change said translational position with respect to said one or

2   more of said data objects, and

3   determining said appearance of said one or more of said data objects, at least in

4   part, in dependence on said translational position.

1   15.   A method according to claim 13 further comprising,

2   determining said one or more of said data objects, at least in part, in dependence

3   on said translational position of said user.

1   16.   A method according to claim 8 further comprising, enabling said user to vary said

2   virtual distances with respect to each of said plates.

1   17.   A method according to claim 16 further comprising,

2   defining a threshold smallest virtual distance at which said closest one of said

3   hierarchical plates is determined to be located virtually behind said user,

4   in response to said user navigating to said threshold smallest virtual distance,

5   ceasing to display said closest one of said hierarchical plates, and

6   defining a plate having a next smallest virtual distance to be said closest one of

7   said hierarchical plates.

1   18.   A method according to claim 5 further comprising, providing a visual indication

2   to said user as to which of said hierarchical plates is being displayed.

1   19.   A method according to claim 18 wherein the step of providing further comprises,

2   employing a breadcrumb trail.

1   20.   A method according to claim 19 further comprising, enabling said user to select a

2   representation of one of said hierarchical plates displayed in said visual indication,

3   thereby changing said appearance to said selected one of said hierarchical plates.

1   21.   A system for viewing information, the system comprising,

2   a computing device adapted to employ one or more data objects contained within

3   a data source and a spatial paradigm for defining hierarchical relationships between said

4   data objects, to define one or more hierarchical plates, and an appearance for each of said

5   hierarchical plates, said appearance containing a graphical representation of one or more

6   of said data objects, and to locate in a virtual space each of said one or more hierarchical

7   plates, based at least in part on said spatial paradigm.

1   22.   The system of claim 21 further adapted to define in a portion of said appearance

2   of a first of said one or more hierarchical plates an appearance of data objects associated

3   with a second hierarchical plate at a size relatively smaller than data objects contained in

4   said first hierarchical plate.

1   23.   The system of claim 21 further adapted to employ raster graphics in defining said

2   graphical representation.

1   24.   The system of claim 21 further adapted to employ vector graphics in defining said

2   graphical representation.

1   25.   A system of viewing information, the system comprising,

2   a computing device adapted to employ one or more hierarchical plates, each one

3   of said hierarchical plates having an appearance, said appearance containing a graphical

4   representation of one or more data objects associated with said one of said hierarchical

5   plates, and a hierarchical relationship in a virtual space between said one or more

6   hierarchical plates, to display on a client, from an adjustable viewing perspective of a

7   user, said appearance of a first of said one or more hierarchical plates, said appearance

8   corresponding to a current virtual location of said user, and to enable said user to navigate

9   said one or more hierarchical plates in a substantially unrestricted fashion.

1   26.   The system of claim 25 further adapted to display in a portion of said appearance

2   of said first hierarchical plate an appearance of data objects associated with a second

3   hierarchical plate, located virtually behind said first hierarchical plate in said virtual

4   display space.

1   27.   The system of claim 25 further adapted to display said appearance of data objects

2   associated with a second hierarchical plate at a size relatively smaller than said data

3   objects associated with said first hierarchical plate.

1   28.   A system according to claim 25 further adapted to define virtual distances from

2   each of said hierarchical plates to said user, as said virtual distance from said first one of

3   said hierarchical plates to said user decreases, to display a reduced number of said one or

4   more of said data objects associated with said first one of said hierarchical plates, and

5   more detail with respect to said reduced number, and as said virtual distance from said

6   first one of said hierarchical plates to said user increases, to display an increased number

7   of said one or more of said data objects associated with said first one of said plates, and

8   less detail with respect to said increased number.

1   29.   A system according to claim 25 further adapted to define said first hierarchical

2   plate to be translucent, and enabling said user to view through said first hierarchical plate

3   one or more data objects on a second one of said hierarchical plates located at a greater

4   virtual distance from said user than said first hierarchical plate.

1　30.　A system according to claim 25 further adapted to define said first hierarchical

2　plate to be opaque, and inhibiting said user from viewing through said first hierarchical

3　plate said one or more data objects associated with a second one of said hierarchical

4　plates located at a greater virtual distance from said user than said first hierarchical plate.

1　31.　A system according to claim 25 further adapted to define a closest one of said one

2　or more hierarchical plates as having a smallest one of said virtual distances, and to

3　employ said closest one of said hierarchical plates as said first one of said hierarchical

4　plates.

1　32.　A system according to claim 25 further adapted to conceptually organize said one

2　or more data objects on each of said one or more hierarchical plates to be hierarchically

3　equivalent.

1　33.　A system according to claim 25 further adapted to define a virtual translational

2　position of said user with respect to said one or more of said data objects, and to

3　determine said appearance of said one or more of said data objects, at least in part, in

4　dependence on said translational position.

1　34.　To enable said user to change said translational position with respect to said one

2　or more of said data objects.

1　35.　A system according to claim 33 further adapted to determine said one or more of

2　said data objects, at least in part, in dependence on said translational position of said user.

1   36.   A system according to claim 28 further adapted to enable said user to vary said

2   virtual distances with respect to each of said plates.

1   37.   A system according to claim 36 further adapted to define a threshold smallest

2   virtual distance at which said closest one of said hierarchical plates is determined to be

3   located virtually behind said user, in response to said user navigating to said threshold

4   smallest virtual distance, to cease to display said closest one of said hierarchical plates,

5   and to define a plate having a next smallest virtual distance to be said closest one of said

6   hierarchical plates.

1   38.   A system according to claim 25 further adapted to provide a visual indication to

2   said user as to which of said hierarchical plates is being displayed.

1   39.   A system according to claim 38 further adapted to employ a breadcrumb trail.

1   40.   A system according to claim 38 further adapted to enable said user to select a

2   representation of one of said hierarchical plates displayed in said visual indication,

3   thereby changing said appearance to said selected one of said hierarchical plates.